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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,160	06/12/2007	Hans Sjblom	150-356	5287
Steven S. Payne Arator IP Law Group 1101 17th Street N.W. Suite 1005 Washington, DC 20036				
7590 09/12/2008				
EXAMINER				
SMITH, RICHARD A				
ART UNIT		PAPER NUMBER		
2841				
MAIL DATE		DELIVERY MODE		
09/12/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/587,160

Applicant(s)

SJOBLOM, HANS

Examiner

R. Alexander Smith

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 16, 17 and 19-30 is/are rejected.
7) ☒ Claim(s) 18 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 25 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date 20060725
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figures 1A-1F should be designated by a legend such as --Prior Art-- or -- Related Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters 119 and 120 in figure 11 have been used to designate respectively the inflated chamber and a gas conduit, and also the motion arrows shown for each wing portion. Please see the following objection.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: For figure 11, reference characters 117-120. Please note the previous objection to 119 and 120.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of claims 24 and 25, i.e., the smoke and heat generating means, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 16-30 are objected to because of the following informalities:

Claim 16:

(a) The phrase "said attack surface has a maximum at absent relative air-flow" in lines 14-15 is confusing because as written it appears that "has a maximum" is lacking a noun, e.g., has a maximum attack angle. Furthermore, the phrase appears to be grammatically incorrect.

(b) "and vice versa" at the end of the claim is confusing there are two possible interpretations. The second interpretation being that increasing relative air-flow passively decreases, and passively increases (a.k.a. vice versa), the lift generating surface. This second interpretation does not appear to the examiner as being the applicant's intent.

Claim 30 is objected to for similar reasons as applied to claim 16.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 16, 17, 19, 21 and 26-30 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,722,498 to Cameron.

For claims 16 and 30, Cameron discloses a location signaling device and method comprising a winged balloon (three wings 16A-16C as shown in figures 3-5 and two wings 16A and 16B as shown in figures 7-9), a tether line (26), an inflatable aerodynamically shaped hollow body with a lighter than air gas (column 3 lines 61-65 for figure 5), a flexible wing portion which is passively variable (via crease line 29).

With respect to a wing attack surface, and wherein the attack surface is a maximum at absent relative air-flow and increasing air-flow passively decreases the lift generating surface: Cameron appears to meet these limitations via the discussions involving the tails 16A-16C wherein the tails are yieldably bendable in an upward direction within at least a limited angular range during use, and wherein the tails are resiliently biased into an upwardly inclined position as discussed throughout the specification. Cameron discloses in column 5 lines 22-65 that the tails are upwardly biased to provide the desired lifting when exposed to even minimal winds and that the tails buckle along crease line 29 under the force of the wind which, in a broad sense, appears to the examiner as meeting the above limitations.

Cameron further discloses:

the shape being generally arrow shaped in claim 17,

the wing portions being of a resilient material (column 5 lines 22-30) in claim 19,

the balloon comprising at least one radar reflective surface (33) in claim 21,

the balloon being made of a water repellent material (via the underwater launching of the balloon and via the discussion of the water droplets accumulating on the airfoil surface due to rain) in claim 26,

means for converting relative airflow to a reciprocating motion of the wing balloon (via swivel 24 and the discussion involving wind shifts and the airfoil freely turning to again face into the wind in the paragraph starting at column 4 line 65) in claim 27,

the device being for search and rescue of people (column 1 lines 5-23) in claim 28 and for locating equipment (column 1 lines 43-46) in claim 29.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron.

Cameron teaches all that is claimed as discussed in the above rejections of claims 16, 17, 19, 21 and 26-30 except for the tether line having a length of 30 m and wherein said tail is radar reflective.

The length being of 30 m is only considered to be the "optimum" values of the length of the tether disclosed by Cameron, as stated above, that a person having ordinary skill in the art

would have been able to determine using routine experimentation based, among other things, on the having the balloon at a height such that it is clearly visible to search and rescue or other personnel. See In re Boesch, 205 USPQ 215 (CCPA 1980).

With respect to the tail being radar reflective: It would have been obvious to one having ordinary skill in the art at the time of the invention was made to place the radar reflective pieces on the tail, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse 86 USPQ 70. In this case, to increase the surface area and/or to obtain slightly different angles of reflections so that the balloon is more noticeable to radar detection equipment.

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron in view of US 3,381,655 to Rozzelle.

Cameron teaches all that is claimed as discussed in the above rejections of claims 16, 17, 19, 21 and 26-30 except for the balloon having a highly visible color.

Rozzelle discloses a rescue balloon wherein the balloon may be marked with bright colors to attract attention and to be visible from long distances (column 2 lines 44-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the balloon, taught by Cameron, to have a highly visible color in order to attract attention and to improve visibility, as taught by Rozzelle.

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron in view of US 4,052,955 to Haushalter.

Cameron teaches all that is claimed as discussed in the above rejections of claims 16, 17, 19, 21 and 26-30 except for the balloon having a smoke generating means.

Haushalter disclose an emergency balloon device and teaches that smoke generating means can be added to promote easy detection of a lost person (column 1 lines 51-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the balloon, taught by Cameron, to include a smoke generating means in order to promote easy detection of a lost person, as taught by Haushalter.

12. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron in view of US 3,837,281 to Shaffer et al.

Cameron teaches all that is claimed as discussed in the above rejections of claims 16, 17, 19, 21 and 26-30 except for the balloon having a chemical heat generating means.

Shaffer et al. disclose a thermal radiation emitter involving a balloon (abstract) and teaches chemical heat generating means (11 and 12) can be used for locating objects, such as downed aircraft, by infra-red detectors (column 1 lines 8-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the balloon, taught by Cameron, to include a chemical heat generating means in order to detect objects via infra-red detectors, as taught by Shaffer et al.

Allowable Subject Matter

13. Claim 18 would be allowable if rewritten to overcome the claim objections set forth in this Office Action for claim 16 and to include all of the limitations of the base claim and any intervening claims.

14. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related devices or methods.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R.A.Smith/

September 12, 2008

R. Alexander Smith
Primary Examiner Art Unit 2841